

being spun very fine have appeared coloured, as some have observed, and that the coloured fibres of some silks by varying the position of the Eye do vary their Colour. Also the Colours of silks, cloths, and other substances, which Water or Oyl can intimately penetrate, become more faint and obscure by being immersed in those liquors, and recover their vigor again by being dried, much after the manner declared of thin Bodies in the 10th and 21th Observations. Leaf-gold, some sorts of painted Glass, the infusion of *Lignum Nephriticum*, and some other substances reflect one Colour, and transmit another, like thin Bodies in the 9th and 20th Observations. And some of those coloured powders which Painters use, may have their Colours a little changed, by being very elaborately and finely ground. Where I see not what can be justly pretended for those changes, besides the breaking of their parts into less parts by that contrition after the same manner that the Colour of a thin Plate is changed by varying its thickness. For which reason also it is that the coloured flowers of Plants and Vegetables by being bruised usually become more transparent than before, or at least in some degree or other change their Colours. Nor is it much less to my purpose, that by mixing divers liquors very odd and remarkable productions and changes of Colours may be effected, of which no cause can be more obvious and rational than that the saline corpuscles of one liquor do variously act upon or unite with the tinging corpuscles of another, so as to make them swell, or shrink (whereby not only their bulk but their density also may be changed) or to divide them into smaller corpuscles, (whereby a coloured liquor may become

come transparent) or to make many of them associate into one cluster, whereby two transparent liquors may compose a coloured one. For we see how apt those saline menstrua are to penetrate and dissolve substances to which they are applied, and some of them to precipitate what others dissolve. In like manner, if we consider the various Phenomena of the Atmosphere, we may observe, that when Vapors are first raised, they hinder not the transparency of the Air, being divided into parts too small to cause any reflexion in their superficies. But when in order to compose drops of rain they begin to coalesce and constitute globules of all intermediate sizes, those globules when they become of a convenient size to reflect some Colours and transmit others, may constitute Clouds of various Colours according to their sizes. And I see not what can be rationally conceived in so transparent a substance as Water for the production of these Colours, besides the various sizes of its fluid and globular parcels.

P R O P. VI.

The parts of Bodies on which their Colours depend, are denser than the medium, which pervades their interstices.

This will appear by considering, that the Colour of a Body depends not only on the rays which are incident perpendicularly on its parts, but on those also which are incident at all other Angles. And that according to the 7th Observation, a very little variation of obliquity will change the reflected Colour where the thin body or small particle is rarer than the ambient

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